

Notice of Allowability

Application No.

10/665,595

Examiner

Remmon R. Fordé

Applicant(s)

THIBEAULT ET AL.

Art Unit

2826

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 2/23/04.
2. ☒ The allowed claim(s) is/are 37-40 (respectively renumbered as 1-4).
3. ☒ The drawings filed on 17 September 2003 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date 2/05/04; 2/23/04
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____.
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

Minhloan Tran
Minhloan Tran
Primary Examiner
Art Unit 2826

DETAILED ACTION

Reasons For Allowance

Claims 37-40 are allowed.

The following is an examiner's statement of reasons for allowance:

Claim 37 recites a method for growing a light emitting diode structure having an internal disperser layer including the specific method steps of growing a first semiconductor layer on the substrate, the first layer having a rough surface; stopping growth of the semiconductor layer; growing a disperser layer of semiconductor material on the roughened layer, the disperser layer having a different index of refraction than the first layer; growing a second layer on the disperser layer, the second layer having a similar index of refraction as the first layer. The abovementioned specific method steps are neither anticipated by nor obvious over the prior art of record. Likewise, claims 38 and 39 are also allowable as being dependent upon allowable claim 37.

Claim 40 recites a method for manufacturing an AlInGaN light emitting diode having an internal disperser layer including the specific method steps of growing uncoalesced islands of material made of $\text{Al}_x\text{In}_y\text{Ga}_{1-x-y}\text{N}$, $0 \leq x \leq 1$, $0 \leq y \leq 1$, on said substrate; stopping the growth of islands; depositing a disperser layer on said uncoalesced islands, said disperser layer having a different index of refraction from said highly doped GaN material; growing a layer of material made of $\text{Al}_x\text{In}_y\text{Ga}_{1-x-y}\text{N}$, $0 \leq x \leq 1$, $0 \leq y \leq 1$, on said disperser layer, said layer having a smooth surface. The abovementioned specific method steps are neither anticipated by nor obvious over the prior art of record.

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Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Relevant Prior Art

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Tarsa et al., Hosoba and Krames et al. each disclose methods for making LED structures.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Remmon R. Fordé whose telephone number is (571) 272-1916. The examiner can normally be reached on Monday-Thursday (8:00-6:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan J. Flynn can be reached on (571) 272-1915. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Remmon R. Fordé